



Discussion Point (1): Lateral Transport of Carbon

Interest so far: Butman, Natali, Sonnentag, Sweeney, Watts, Commane

- Land - river - ocean transport of carbon
- Is the magnitude of lateral transport significant compared to the atmospheric flux at an eddy flux site?
- Oliver Sonnentag has site measurements. Not much IAV.
- Is it possible to estimate lateral transport contribution for other sites within the domain? (e.g. Olefeldt 2012 study in Sweden)
- Are more / new measurements worth investing in?
 1. New technology might make measurements much less intensive/expensive
 2. In field 2018: Zona, Natali, Butman (Striegl)



Discussion Point (2): Scaling fluxes and response functions

- Discussion between groups needed to make sure we understand what each is doing: e.g. ArctiCAP regional fluxes have a larger footprint than SAR swaths.
- Detailed SAR to Carbon flux comparison for North Slope:
Interest so far Moghaddam, Sweeney, Commane, Schiferl
 - SAR gives soil moisture and Active layer depth
 - Upscale SAR to North Slope
 - Use North Slope to test upscaling of and functional relationships
 - Calculate CH₄ fluxes (maybe CO₂ as well) and compare...
- Scaling at locations with an abundance of data: Target areas
 - Eddy flux, aircraft fluxes, swaths, etc
 - Can we use reanalysis to check the scaling inputs?



Discussion Point (3): Carbon partitioning

Interest so far Hmimina, Watts, Munger, Hummerich, Birch

- Carbon flux partitioning and attribution (incl. seasonal amplitude)
 - Component Fluxes: GPP vs Reco
 - Can we test partitioning methods for the eddy flux towers?
 - Can we detect trends in the component fluxes? Yearly to Decadal?
- Calculating total carbon budgets (links back to aquatic?)
- Gridded options
 1. strengths/weaknesses/bias between different available products (model drivers): spatial/temporal resolutions
 2. Focus area of selected tundra and boreal sites with overlapping scale measurements?
 3. Chamber -> Eddy Flux -> Swath/Airborne -> ArctiCAP